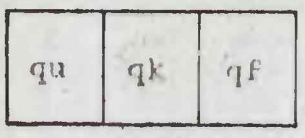
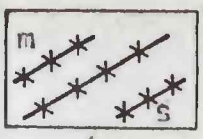
72-176

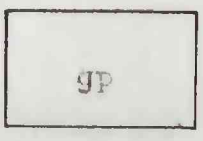
GEOLOGIC EXPLANATION



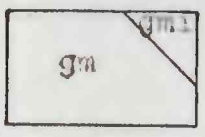
Qu, unconsolidated deposits; gravel, sand, and silt, mainly along wadis; Qf, alluvial fan deposits; Qk, khabra deposits composed of silt, clay, and muddy sand in undrained or poorly drained basins



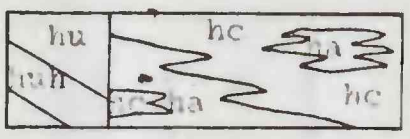
Dikes; s, silicic; m, mafic



gp, granite; pink, medium to lower coarse-grained, biotite granite in cresent-shaped stocks



gm, granitic rocks, undivided; gray, pinkish white, pink, and red, generally medium-grained biotite granitic rocks with few to abundant subangular to round dark-colored inclusions; only marginal parts of granitic masses are porphyritic and contain significant amounts of hornblende; gmi, injection zones along portions of marginal parts of some granitic bodies, composed of granite sills and and strongly metamorphosed, dike-like sheets of relic layered rocks of Haliban formation



Haliban formation
Note: Diagrammatic representation of Haliban formation only; contacts between units making up formation not shown; letter symbols for parts of formation indicate predominant rock types only at localities where shown.

hu, Haliban formation, undivided; interlayered, medium to dark-colored metasedimentary and metavolcanic rocks; includes metamorphosed, wacke-type shale, sandstone, and conglomerate, marble, schistose marble, calcerous schist, calic-silicate rocks, metavolcanic pyroclastic and flow rocks; latter comprise mainly meta-andesitic flows and agglomerates, silicic varieties minor. ha, predominantly andesitic metavolcanic rocks; hc, predominantly clastic metasedimentary rocks, including marble, may be equivalent, in part, to Murdama formation; huh, higher grade metavolcanic and metasedimentary rocks of Haliban formation undivided, present mainly along margins of older granitic bodies

Geologic contact
Dashed where approximately located, queried where doubtfully located

Trace or trend line
Showing dip

Fault
Showing relative horizontal movement

Fault or lineament
From aerial photographs

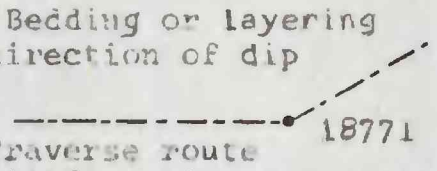
Probable anticline

Anticline
Showing crestline and direction of plunge

Syncline
Showing crestline and direction of plunge

Vertical bedding or layering

Bedding or layering
Showing direction of dip



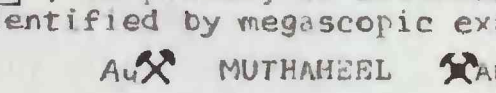
Traverse route
Showing field station and sample number

Symbols of Elements

Ag-silver
Au-gold
Cu-copper
Mo-molybdenum
Ni-nickel
Pb-lead
Zn-zinc

Mineral Deposits

No symbols listed below represent specific quantitative or semiquantitative results. Element symbols in circles and squares with any other symbols indicate, respectively; anomalous amounts of single metals, (Cu), or several metals, (ME), as determined by laboratory analyses, mainly by emission spectrometric, wet chemical, and assay methods; and single metals, Cu , or several metals, ME , in primary or secondary minerals identified by megascopic examination.

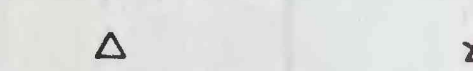


Ancient mine or prospect
Showing name and commodity exploited; plain symbol represents workings only, symbol with square indicates ruins

Vein
Open circle, unmetallized or non-metallic; iron-stained or contains sparse iron sulfide or oxide minerals; solid circle, metallized as determined by megascopic examination or laboratory analyses

Pegmatite
Open circle, simple; solid circle, zoned

Isolated mineral occurrence
Mainly quartz veins containing primary or secondary metalliferous minerals



Silicified breccia vein
Barren or slightly iron-stained; crossed, strikes northwestward

Unevaluated mineral occurrence
Mainly isolated, barren quartz masses

18774 18761dt

Sample of residual and wash material
Collected to emphasize heavy fraction; d, dump material from ancient workings; t, tailings

18775 18720

Sample of sediment
Collected to emphasize heavy fraction; solid lines, from wadi; dashed lines, from khabra

plate 1